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ABSTRACT

A study evaluated the effectiveness of a direct instructional paradigm for teaching children to comprehend main ideas of prose passages. Subjects, 69 children in three fourth grade classes, were randomly assigned to an experimental "strategy" group receiving direct instruction in main ideas, an experimental "basal" group receiving massed basal reader instruction in main ideas, and a control group receiving vocabulary development exercises. All groups received eight 54-minute lessons over a period of three weeks; posttests were administered in the fourth week. The strategy group lessons consisted of a sequence of main skills progressing from main ideas in groups of words to main ideas in passages. Lessons in the basal group were taken directly from a current basal reader series. Results of the posttests revealed no significant differences between the three groups' skills at comprehending main ideas. Given the proven power of direct instruction, differences in the intelligence of the groups and discipline problems with the strategy group may explain these unexpected results. (JL)

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Teaching Children to Comprehend Main Ideas

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Paper presented at the 32nd Annual Meeting of the
National Reading Conference
Clearwater Beach, Florida, December 1982

Several studies have indicated that adult, fluent readers are skillful at comprehending the gist or main ideas of prose passages (Duchastel, 1979; Johnson, 1970; Kintsch & Keenan, 1973; Kintsch, Kozminsky, Streby, McKoon, & Keenan, 1975; Meyer, 1975; Meyer & McConkie, 1973). Research with young or developing readers, however, suggests that children do not have great inherent skill at main idea comprehension, and they tend to recall salient details as frequently as they recall the gist (Baumann, 1981, in press-a; Dunn, Matthews, & Bieger, 1979; Otto, Barrett, & Koenke, 1968; Taylor, 1980; Tierney, Bridge, & Cera, 1978-79; also see a review by Baumann, 1982). Recent research on teacher behaviors linked to effective reading instruction (e.g., Berliner, 1981; Berliner & Rosenshine, 1977; Duffy, 1981; Fisher, Berliner, Filby, Marliave, Cahen, & Dishaw, 1980; Good & Brophy, 1978; Rosenshine & Berliner, 1978) along

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with results of several comprehension instructional studies (e.g., Hansen, 1981; Hansen & Pearson, 1982; Raphael & Pearson, 1982; Tharp, 1982) reveal that when children are provided intensive, direct instruction in specific reading comprehension skills, they acquire these skills and apply them in new reading contexts. As Pearson (1982) so aptly stated: "The data are encouraging. It looks as though we can teach comprehension skills after all" (p. 22). It was the purpose of this study, therefore, to evaluate the effectiveness of a direct instructional paradigm for teaching children to comprehend main ideas.

Method

Subjects and Design

Sixty-nine children in three, fourth-grade classes from a suburban Dallas school district participated in the study. Classes were randomly assigned to one of three groups: Strategy (experimental group receiving direct instruction in main ideas), Basal (experimental group receiving massed basal reader instruction in main ideas), or Control (placebo group receiving vocabulary development exercises). A posttest-only control group design using analysis of covariance was employed, with the Otis-Lennon Mental Ability Test (Flementary II, Form J, Otis & Lennon, 1967) being the concomitant variable.

Instructional Procedure

Both experimental groups and the strategy group received eight lessons of 45 minutes each over a period of three weeks. Posttesting occurred during the fourth week. The experimenter administered all instruction and posttests.

The eight Strategy group lessons consisted of a sequence of main idea skills progressing from main ideas in groups of words to main ideas in passages (see Table 1). The teaching strategy itself (cf., Baumann, 1983;

Baumann & Stevenson, 1982) consisted of five steps and incorporated principles of effective comprehension instruction gleaned from teacher effectiveness research and recent successful comprehension instructional studies (see synthesis reviews by Baumann, in press-b; Brown, Campione & Day, 1981; Pearson, 1982). The five steps in the instructional strategy are (1) Introduction, (2) Example, (3) Direct Instruction, (4) Teacher-Directed Application, and (5) Independent Practice. Table 2 presents a brief description of each of the five steps.

Insert Tables 1 and 2 about here

The Basal group received an equivalent amount of instructional time on main ideas, but these lessons were taken directly from a current basal reader series (Level 9, Mystery Sneakers, of the Ginn Reading Program, Clymer & Venezky, 1982). Students in the Basal group were administered eight such main idea lessons exactly as directed within the basal manual.

The Control group received eight lessons on vocabulary development. The content of these lessons was adapted from meaning vocabulary exercises found in Johnson and Pearson (1978, chap. 3).

Dependent Measures

At the conclusion of the instruction, all groups were administered a series of tests to assess main idea comprehension: (a) commercial tests of explicit and implicit main ideas in paragraphs (Green Level Main Idea, 17, 18, 19, and 20, Skills Monitoring System-Reading, 1975), (b) an experimenter constructed test of explicit and implicit main ideas in passages, and (c) an experimenter constructed test which measured students' ability to associate details with main ideas.

Results

Table 3 presents means and standard deviations of raw scores and adjusted means for all dependent measures across groups. Separate one-way analyses of covariance were conducted. The only significant ANCOVA test was for implicit main ideas in paragraphs, $F(2,64) = 3.483$, $p < .05$. A post hoc analysis revealed that the Basal group outperformed the Control group on this test. Therefore, with the exception of this particular test, results of the study revealed no significant differences between the Strategy, Basal, and Control groups' skill at comprehending main ideas.

Insert Table 3 about here

Discussion

The unexpected and inconclusive results of the present study have several possible interpretations. One interpretation is simply that direct instruction in main idea comprehension is no more effective than basal reader instruction or no instruction at all. Given the demonstrated difficulty children have in comprehending main ideas and the proven power of direct instruction in other comprehension instructional studies, it is unlikely that concentrated, direct instruction would have no positive effect compared to no main idea instruction at all. Had the results generally favored both experimental groups, with little or no difference between the Strategy and Basal group, it might be argued that either approach--a direct instruction paradigm or massed basal practice--is superior to no instruction at all. However, given the failure to identify any overall advantage for either experimental group, other possible explanatory factors must be considered.

One alternative explanation involves the methodological limitation of having to work with intact groups. Although the building principal stated

that it was school policy to form heterogeneous classes by randomly assigning children to classroom teachers, a post hoc analysis of the fourth grade students' IQs revealed that class means were considerably higher for the Control and Basal groups compared to the Strategy group (Strategy $\bar{X}$ = 103.3, Basal $\bar{X}$ = 108.9, Control $\bar{X}$ = 112.7). A one-way analysis of variance revealed that group IQ differed at the .10 confidence level, $F(2, 66) = 2.83$, $p < .10$. Thus, analysis of covariance may have been unable to control for these relatively large group differences.

Another potential difficulty associated with the inability to randomly assign students to treatments involved the behavior of the students. Children in the Basal and Control classes were well behaved and easy to instruct; it was obvious that the teachers had control of their students. When the experimenter entered the classroom, these students were seated, quiet, and prepared for instruction. In contrast, the students in the Strategy class were boisterous, unruly, and needed continual disciplining to maintain order and keep them attending to instruction. Although the experimenter himself taught fourth grade for six years and was experienced in disciplining disruptive students, instructional time at the beginning of each Strategy group lesson was lost inevitably getting the children seated, attentive, and prepared for instruction. Thus, the controlled class atmosphere and good behavior of the children in the Basal and Control groups may have enhanced their ability to attend to instruction and perform well on posttests; conversely, the children's performance in the Strategy group may have been diminished by their disruptive behavior.

Further research is needed to clarify the effectiveness of direct instruction in main idea comprehension. Randomly assigning children to

treatments will control for between-class ability and behavior differences, although external validity will be sacrificed in the process. Another alternative would be to work with intact groups but expand the number of classes within each treatment, instruct classroom teachers to administer the instruction, and use the entire class as the unit of analysis. Investigations exploring these methodological alternatives are currently in progress.

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Table 1

Content of Main Idea Instruction for Strategy Group

Lesson Number and Title	Description
1. Main Ideas in Lists of Words	Students taught how to analyze a list of related words and determine the "main idea" (e.g., shirt, pants, dress, hat, shoes = clothing).
2. Main Ideas in Sentences	Students taught how to analyze a sentence and determine its topic and then what is said about the topic, which collectively describes the main idea. For example, in the sentence, Susan, the girl who lives down the street in the blue house, goes to Girl Scouts every Wednesday afternoon, the topic is Susan, what is said about the topic is goes to Girl Scouts, and the main idea is Susan goes to Girl Scouts.
3. Topics and Explicit Main Ideas in Paragraphs	Students are taught to generalize the skill of identifying topics and what is said about them to paragraphs. After such a main idea is determined, students learn to look for a sentence that states the main idea (topic sentence).
4. Explicit Main Ideas and Supporting Details	Students review finding explicit main ideas and are then taught to identify details that support main ideas.
5. Topics and Implicit Main Ideas in Paragraphs	Students are taught to identify implicit main ideas by following the procedure used in Lesson 3; that is, determine the topic and what is said about the topic. Students are then taught to compose a main idea when they are unable to find a topic sentence in a paragraph.
6. Implicit Main Ideas and Supporting Details	Modeled after Lesson 4, students are taught to associate details with inferred main ideas.
7. Topics and Explicit Main Ideas in Passages	Students are taught to identify the topic of a passage, what is said about the topic (i.e., the content of paragraphs that comprise the passage), and then identify a main idea (theme statement) for an entire passage.
8. Topics and Implicit Main Ideas in Passages	Students are taught to infer main ideas for passages when no theme statement is present. Lesson modeled after Lesson 5.

Table 2

Strategy for Direct Instruction in Main Ideas

Step	Description
1. Introduction	Students are provided a description of the skill that will be taught and a rationale for the importance of that skill. This provides students a structured overview of the content and purpose of the lesson that follows.
2. Example	An example of the skill to be taught is provided. This extends the Introduction and further clarifies what the ensuing lesson will be about.
3. Direct Instruction	A formal lesson, directed by the teacher, follows. Students are provided portions of text containing the main idea skill to be taught and are then led through the process of determining what the main idea is. Students are involved in instruction as much as possible (underlining, circling, etc. at the board), and heuristics are used whenever appropriate (e.g., using an umbrella or table/legs analogy to demonstrate main ideas and details).
4. Teacher-Directed Application	In this step, students are required to apply the main idea skill under the supervision of the teacher. Using natural texts, students must identify the main idea element previously taught, and then the teacher monitors their success. Reteaching follows if students have difficulty with the application exercises.
5. Independent Practice	In this step, the children must complete independently exercises finding main ideas, thus completing the transition from full teacher responsibility (Direct Instruction) to shared teacher/pupil responsibility (Teacher-Directed Application) to full student responsibility (Independent Practice). Natural passages are used in this step as much as possible.

Table 3

Means and standard deviations for main idea tests

Dependent Measure	Strategy Group (n = 24)			Basal Group (n = 21)			Control Group (n = 24)		
	mean[a]	SD[b]	mean[c]	mean[a]	SD[b]	mean[c]	mean[a]	SD[b]	mean[c]
Explicit MIs in Paragraphs (16 items)	12.54	2.62	13.11	13.10	2.72	13.03	12.88	2.03	12.38
Implicit MIs in Paragraphs (16 items)	9.63	2.70	10.06	11.71	2.41	11.66	10.29	2.96	9.90
Explicit MIs in Passages (6 items)	2.71	0.62	2.78	2.67	0.66	2.65	2.50	0.93	2.43
Implicit MIs in Passages (6 items)	1.79	1.14	1.94	2.05	0.86	2.03	2.00	0.93	1.87
Details with MIs (12 items)	10.54	1.35	10.86	10.38	1.66	10.34	10.33	1.81	10.05

[a]unadjusted means

[b]standard deviations for unadjusted means

[c]adjusted means